



SEQUENCE LISTING

<110> ONO, ETSURO
UEDE, TOSHIMITSU

<120> METHOD FOR PRODUCING A MAMMAL PROVIDED WITH RESISTANCE
TO AN ALPHA-HERPES VIRUS MEDIATED INFECTION AND MAMMAL
OBTAINED BY IMPLEMENTING SAID METHOD AND SAID MAMMAL'S
PROGENY

<130> 86076.0071

<140> 10/530,539

<141> 2005-09-19

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<160> 6

<170> PatentIn Ver. 3.3

<210> 1

<211> 440

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
protein sequence

<400> 1

Met Glu Pro Leu Pro Gly Trp Gly Ser Ala Pro Trp Ser Gln Ala Pro
1 5 10 15

Thr Asp Asn Thr Phe Arg Leu Val Pro Cys Val Phe Leu Leu Asn Leu
20 25 30

Leu Gln Arg Ile Ser Ala Gln Pro Ser Cys Arg Gln Glu Glu Phe Leu
35 40 45

Val Gly Asp Glu Cys Cys Pro Met Cys Asn Pro Gly Tyr His Val Lys
50 55 60

Gln Val Cys Ser Glu His Thr Gly Thr Val Cys Ala Pro Cys Pro Pro
65 70 75 80

Gln Thr Tyr Thr Ala His Ala Asn Gly Leu Ser Lys Cys Leu Pro Cys
85 90 95

Gly Val Cys Asp Pro Asp Met Gly Leu Leu Thr Trp Gln Glu Cys Ser
100 105 110

Ser Trp Lys Asp Thr Val Cys Arg Cys Ile Pro Gly Tyr Phe Cys Glu
115 120 125

Asn Gln Asp Gly Ser His Cys Ser Thr Cys Leu Gln His Thr Thr Cys
 130 135 140
 Pro Pro Gly Gln Arg Val Glu Lys Arg Gly Thr His Asp Gln Asp Thr
 145 150 155 160
 Val Cys Ala Asp Cys Leu Thr Gly Thr Phe Ser Leu Gly Gly Thr Gln
 165 170 175
 Glu Glu Cys Leu Pro Trp Thr Asn Cys Ser Ala Phe Gln Gln Glu Val
 180 185 190
 Arg Arg Gly Thr Asn Ser Thr Asp Thr Thr Cys Ser Ser Asp Pro Glu
 195 200 205
 Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala
 210 215 220
 Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro
 225 230 235 240
 Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
 245 250 255
 Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val
 260 265 270
 Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln
 275 280 285
 Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln
 290 295 300
 Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala
 305 310 315 320
 Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro
 325 330 335
 Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr
 340 345 350
 Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser
 355 360 365
 Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr
 370 375 380
 Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr
 385 390 395 400
 Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe
 405 410 415
 Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
 420 425 430

Ser Leu Ser Leu Ser Pro Gly Lys
 435 440

<210> 2
 <211> 581
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 protein sequence

<400> 2
 Met Ala Arg Met Gly Leu Ala Gly Ala Ala Gly Arg Trp Trp Gly Leu
 1 5 10 15
 Ala Leu Gly Leu Thr Ala Phe Phe Leu Pro Gly Ala His Thr Gln Val
 20 25 30
 Val Gln Val Asn Asp Ser Met Tyr Gly Phe Ile Gly Thr Asp Val Val
 35 40 45
 Leu His Cys Ser Phe Ala Asn Pro Leu Pro Gly Val Lys Ile Thr Gln
 50 55 60
 Val Thr Trp Gln Lys Ala Thr Asn Gly Ser Lys Gln Asn Val Ala Ile
 65 70 75 80
 Tyr Asn Pro Ala Met Gly Val Ser Val Leu Ala Pro Tyr Arg Glu Arg
 85 90 95
 Val Glu Phe Leu Arg Pro Ser Phe Thr Asp Gly Thr Ile Arg Leu Ser
 100 105 110
 Arg Leu Glu Leu Glu Asp Glu Gly Val Tyr Ile Cys Glu Phe Ala Thr
 115 120 125
 Phe Pro Ala Gly Asn Arg Glu Ser Gln Leu Asn Leu Thr Val Met Ala
 130 135 140
 Lys Pro Thr Asn Trp Ile Glu Gly Thr Gln Ala Val Leu Arg Ala Lys
 145 150 155 160
 Lys Gly Lys Asp Asp Lys Val Leu Val Ala Thr Cys Thr Ser Ala Asn
 165 170 175
 Gly Lys Pro Pro Ser Val Val Ser Trp Glu Thr His Leu Lys Gly Glu
 180 185 190
 Ala Glu Tyr Gln Glu Ile Arg Asn Pro Asn Gly Thr Val Thr Val Ile
 195 200 205
 Ser Arg Tyr Arg Leu Val Pro Ser Arg Glu Asp His Arg Gln Ser Leu
 210 215 220
 Ala Cys Ile Val Asn Tyr His Met Asp Arg Phe Arg Glu Ser Leu Thr
 225 230 235 240

Leu Asn Val Gln Tyr Glu Pro Glu Val Thr Ile Glu Gly Phe Asp Gly
 245 250 255
 Asn Trp Tyr Leu Gln Arg Met Asp Val Lys Leu Thr Cys Lys Ala Asp
 260 265 270
 Ala Asn Pro Pro Ala Thr Glu Tyr His Trp Thr Thr Leu Asn Gly Ser
 275 280 285
 Leu Pro Lys Gly Val Glu Ala Gln Asn Arg Thr Leu Phe Phe Arg Gly
 290 295 300
 Pro Ile Asn Tyr Ser Met Ala Gly Thr Tyr Ile Cys Glu Ala Thr Asn
 305 310 315 320
 Pro Ile Gly Thr Arg Ser Gly Gln Val Glu Val Asn Ile Thr Glu Phe
 325 330 335
 Pro Tyr Thr Pro Ser Pro Pro Glu His Ala Asp Pro Glu Glu Pro Lys
 340 345 350
 Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu
 355 360 365
 Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
 370 375 380
 Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
 385 390 395 400
 Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val
 405 410 415
 Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
 420 425 430
 Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
 435 440 445
 Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala
 450 455 460
 Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
 465 470 475 480
 Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln
 485 490 495
 Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
 500 505 510
 Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
 515 520 525
 Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu
 530 535 540

Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser
545 550 555 560

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
565 570 575

Leu Ser Pro Gly Lys
580

<210> 3

<211> 376

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
protein sequence

<400> 3

Met Ala Arg Met Gly Leu Ala Gly Ala Ala Gly Arg Trp Trp Gly Leu
1 5 10 15

Ala Leu Gly Leu Thr Ala Phe Phe Leu Pro Gly Ala His Thr Gln Val
20 25 30

Val Gln Val Asn Asp Ser Met Tyr Gly Phe Ile Gly Thr Asp Val Val
35 40 45

Leu His Cys Ser Phe Ala Asn Pro Leu Pro Gly Val Lys Ile Thr Gln
50 55 60

Val Thr Trp Gln Lys Ala Thr Asn Gly Ser Lys Gln Asn Val Ala Ile
65 70 75 80

Tyr Asn Pro Ala Met Gly Val Ser Val Leu Ala Pro Tyr Arg Glu Arg
85 90 95

Val Glu Phe Leu Arg Pro Ser Phe Thr Asp Gly Thr Ile Arg Leu Ser
100 105 110

Arg Leu Glu Leu Glu Asp Glu Gly Val Tyr Ile Cys Glu Phe Ala Thr
115 120 125

Phe Pro Ala Gly Asn Arg Glu Ser Gln Leu Asn Leu Thr Val Met Gly
130 135 140

Ser Val Gly Ile His Gln Pro Gln Thr Cys Pro Ile Cys Pro Gly Cys
145 150 155 160

Glu Val Ala Gly Pro Ser Val Phe Ile Phe Pro Pro Lys Pro Lys Asp
165 170 175

Thr Leu Met Ile Ser Gln Thr Pro Glu Val Thr Cys Val Val Val Asp
180 185 190

Val Ser Lys Glu His Ala Glu Val Gln Phe Ser Trp Tyr Val Asp Gly
195 200 205

Val Glu Val His Thr Ala Glu Thr Arg Pro Lys Glu Glu Gln Phe Asn
 210 215 220
 Ser Thr Tyr Arg Val Val Ser Val Leu Pro Ile Gln His Gln Asp Trp
 225 230 235 240
 Leu Lys Gly Lys Glu Phe Lys Cys Lys Val Asn Asn Val Asp Leu Pro
 245 250 255
 Ala Pro Ile Thr Arg Thr Ile Ser Lys Ala Ile Gly Gln Ser Arg Glu
 260 265 270
 Pro Gln Val Tyr Thr Leu Pro Pro Pro Ala Glu Glu Leu Ser Arg Ser
 275 280 285
 Lys Val Thr Leu Thr Cys Leu Val Ile Gly Phe Tyr Pro Pro Asp Ile
 290 295 300
 His Val Glu Trp Lys Ser Asn Gly Gln Pro Glu Pro Glu Asn Thr Tyr
 305 310 315 320
 Arg Thr Thr Pro Pro Gln Gln Asp Val Asp Gly Thr Phe Phe Leu Tyr
 325 330 335
 Ser Lys Leu Ala Val Asp Lys Ala Arg Trp Asp His Gly Asp Lys Phe
 340 345 350
 Glu Cys Ala Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
 355 360 365
 Ser Ile Ser Lys Thr Gln Gly Lys
 370 375

<210> 4

<211> 578

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
protein sequence

<400> 4

Met Ala Arg Met Gly Leu Ala Gly Ala Ala Gly Arg Trp Trp Gly Leu
 1 5 10 15
 Ala Leu Gly Leu Thr Ala Phe Phe Leu Pro Gly Ala His Thr Gln Val
 20 25 30
 Val Gln Val Asn Asp Ser Met Tyr Gly Phe Ile Gly Thr Asp Val Val
 35 40 45
 Leu His Cys Ser Phe Ala Asn Pro Leu Pro Gly Val Lys Ile Thr Gln
 50 55 60

Val Thr Trp Gln Lys Ala Thr Asn Gly Ser Lys Gln Asn Val Ala Ile
 65 70 75 80
 Tyr Asn Pro Ala Met Gly Val Ser Val Leu Ala Pro Tyr Arg Glu Arg
 85 90 95
 Val Glu Phe Leu Arg Pro Ser Phe Thr Asp Gly Thr Ile Arg Leu Ser
 100 105 110
 Arg Leu Glu Leu Glu Asp Glu Gly Val Tyr Ile Cys Glu Phe Ala Thr
 115 120 125
 Phe Pro Ala Gly Asn Arg Glu Ser Gln Leu Asn Leu Thr Val Met Ala
 130 135 140
 Lys Pro Thr Asn Trp Ile Glu Gly Thr Gln Ala Val Leu Arg Ala Lys
 145 150 155 160
 Lys Gly Lys Asp Asp Lys Val Leu Val Ala Thr Cys Thr Ser Ala Asn
 165 170 175
 Gly Lys Pro Pro Ser Val Val Ser Trp Glu Thr His Leu Lys Gly Glu
 180 185 190
 Ala Glu Tyr Gln Glu Ile Arg Asn Pro Asn Gly Thr Val Thr Val Ile
 195 200 205
 Ser Arg Tyr Arg Leu Val Pro Ser Arg Glu Asp His Arg Gln Ser Leu
 210 215 220
 Ala Cys Ile Val Asn Tyr His Met Asp Arg Phe Arg Glu Ser Leu Thr
 225 230 235 240
 Leu Asn Val Gln Tyr Glu Pro Glu Val Thr Ile Glu Gly Phe Asp Gly
 245 250 255
 Asn Trp Tyr Leu Gln Arg Met Asp Val Lys Leu Thr Cys Lys Ala Asp
 260 265 270
 Ala Asn Pro Pro Ala Thr Glu Tyr His Trp Thr Thr Leu Asn Gly Ser
 275 280 285
 Leu Pro Lys Gly Val Glu Ala Gln Asn Arg Thr Leu Phe Phe Arg Gly
 290 295 300
 Pro Ile Asn Tyr Ser Met Ala Gly Thr Tyr Ile Cys Glu Ala Thr Asn
 305 310 315 320
 Pro Ile Gly Thr Arg Ser Gly Gln Val Glu Val Asn Ile Thr Glu Phe
 325 330 335
 Pro Tyr Thr Pro Ser Pro Pro Glu His Gly Ser Val Gly Ile His Gln
 340 345 350
 Pro Gln Thr Cys Pro Ile Cys Pro Gly Cys Glu Val Ala Gly Pro Ser
 355 360 365

Val Phe Ile Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Gln
 370 375 380
 Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Lys Glu His Ala
 385 390 395 400
 Glu Val Gln Phe Ser Trp Tyr Val Asp Gly Val Glu Val His Thr Ala
 405 410 415
 Glu Thr Arg Pro Lys Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val
 420 425 430
 Ser Val Leu Pro Ile Gln His Gln Asp Trp Leu Lys Gly Lys Glu Phe
 435 440 445
 Lys Cys Lys Val Asn Asn Val Asp Leu Pro Ala Pro Ile Thr Arg Thr
 450 455 460
 Ile Ser Lys Ala Ile Gly Gln Ser Arg Glu Pro Gln Val Tyr Thr Leu
 465 470 475 480
 Pro Pro Pro Ala Glu Glu Leu Ser Arg Ser Lys Val Thr Leu Thr Cys
 485 490 495
 Leu Val Ile Gly Phe Tyr Pro Pro Asp Ile His Val Glu Trp Lys Ser
 500 505 510
 Asn Gly Gln Pro Glu Pro Glu Asn Thr Tyr Arg Thr Thr Pro Pro Gln
 515 520 525
 Gln Asp Val Asp Gly Thr Phe Phe Leu Tyr Ser Lys Leu Ala Val Asp
 530 535 540
 Lys Ala Arg Trp Asp His Gly Asp Lys Phe Glu Cys Ala Val Met His
 545 550 555 560
 Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Ile Ser Lys Thr Gln
 565 570 575
 Gly Lys

<210> 5

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic primer

<400> 5

taactcgagc tcttgccctg aagtttc

<210> 6
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 6
ttaaggatcc gaggagcagg tgggtgtct